

# WILDERNESS EVALUATION

## MOUNT BONAPARTE - 608021

**9,477 acres**

### OVERVIEW

The Mount Bonaparte Potential Wilderness Area (PWA) was originally inventoried as roadless during RARE I. The 1979 RARE II process did not recommend the area for wilderness designation. The 1979 Tonasket Unit Land Management Plan allocated approximately 9,200 acres to wildlife management and the remaining 4,200 acres to semi-primitive recreation management.

Since 1989, approximately 2,635 acres were removed from previous inventory due to road construction and logging; 1,209 acres were added to the previous inventory as they meet the criteria for a potential wilderness area as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the 1989 Okanogan National Forest Land and Resource Management Plan management areas.

**Table 1--Management area percentages (rounded)**

Okanogan National Forest			
05 Recreation/ Scenery	14 Wildlife Diversity Habitat	25 Timber / Range	04M Semi primitive Motorized Recreation
13%	1%	29%	57%

### Location and Access

The Mount Bonaparte PWA lies within T. 38 N., R. 28 and R. 29 E., Okanogan County, Washington. It is located on the eastern portion of the Tonasket Ranger District on the Okanogan-Wenatchee National Forest. Several Forest roads provide access including Roads #33, #3300-100, #3300-300, #3230 and #3235.

### Geography and Topography

The lower slopes have dense mixed-conifer and lodgepole pine stands. Mount Bonaparte is the main topographic feature, rising to 7,258 feet elevation at the Bonaparte fire lookout. Bonaparte's upper slopes are steep and rocky, culminating in the barren summit and open, rocky ridges leading to it.

### Current Uses

The entire area is grazed, though the dense lodgepole pine stands within the upper elevation portion of the PWA present natural barriers to livestock movement and are not utilized. The area is primarily used for hunting, hiking, horseback and mountain bicycle riding and firewood cutting. Bonaparte Trail #306 has been maintained for motorized uses,



which have included trail motorcycle and all-terrain vehicles (ATVs), though the trail currently has a motorized closure due to ruts and erosion occurring. Forest Service personnel maintain and service the lookout using helicopters annually and ATVs weekly.

### **Appearance and Surroundings**

The area encompasses the lands surrounding Mount Bonaparte (the third highest peak in Washington east of the Okanogan River). It also includes a prominent ridge that extends southwest and northeast from the peak. Elevations range from approximately 4,500 feet to 7,257 feet on top of Mount Bonaparte.

The area is typical of mixed-conifer and lodgepole pine forested sites within the Okanogan Highlands. The Mount Bonaparte PWA is surrounded by managed forest stands. Washington State and privately owned lands are in the vicinity of the PWA, and it is also surrounded by a very developed forest road system.

### **Key Attractions**

The Bonaparte fire lookout and, to a lesser extent, Roggow cabin are the only key attractions within the potential wilderness area. Hikers, horseback riders, and motorized recreation enthusiasts use the trails to access the lookout all summer. A few cross-country skiers make the arduous trip to the lookout each winter as well, and a diamond system marks the route. The view on a nice day from the fire lookout is outstanding. The Roggow cabin is used and maintained by hikers, range permittees, and one outfitter-guide.

## ***CAPABILITY FOR WILDERNESS***

### **Level of Natural and Undeveloped Environment**

The natural integrity and appearance within the inventoried potential wilderness area has generally been maintained. Mountain pine beetles have killed much of the mature lodgepole pine on the slopes of Bonaparte. Several timber sales around the perimeter of the potential wilderness area have salvaged dead lodgepole pine. Except for the top of Mount Bonaparte and the dominant ridge, vegetation and topography are similar to the surrounding area.

Eastern brook trout have been introduced.

Houndstongue, a noxious weed, is established within the PWA.

Water quality data is not available for the PWA; however, due to the relatively low level disturbance water quality is assumed to be high. There may be localized disturbances due to grazing activities.

The Mount Bonaparte PWA is minimally impaired by light pollution. The entire PWA rates as Class 2 on the Bortle scale. A Class 2 Typical Truly Dark Sky represents the darkest skies viewed in the continental United States. The summer Milky Way is highly structured to the unaided eye. Any clouds in the sky are visible only as dark holes or voids in the starry background. No light domes from population centers are visible.



## **Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation**

Opportunities for solitude and isolation are low. Because the area is located mostly on the slopes of Mount Bonaparte, it is difficult to get away from the sights and sounds of human activity in the surrounding area. The exception occurs during winter months. The few snowshoe hikers and cross-country skiers who make the trip to the lookout are rewarded with a quiet and serene setting.

Challenge is moderate because of the steepness of the area. The trip up to the lookout in the winter is arduous.

Primitive recreation opportunities include hiking, hunting, mountain biking and horseback riding. Cross-country skiing occurs, chiefly due to the success of the Highlands Nordic Ski Area less than two miles northwest of the potential wilderness area near Mill Creek.

## **Special Features**

The area is within the secondary recovery area for Canada lynx and provides source habitat for the wolverine. Both of these species have very limited distributions in the region.

The Cultural Resource Overview of the Tonasket Planning Unit (Uebelacker 1978) identified evidence of several old cabins in the area (e.g. Roggow Cabin). The primary fire lookout for the Tonasket Ranger District is located on Mount Bonaparte. This lookout and its older ground house are on the National Register of Historic Places.

## **Manageability and Boundaries**

The relatively small size of the area would make management as wilderness difficult. The area lacks identifiable features, which could be used as boundaries to screen users from the sights and sounds of human activity in the surrounding area. Currently, much of the potential wilderness area boundary is on the 5,600-foot contour. Access to the Bonaparte PWA is quite easy as the area is entirely surrounded by national forest and county roads, and system trails traverse it. Most visitors stay on the adjacent roads or hike and ride horseback through the area on trails. Hunters are the exception, as they are more likely to hike cross-country. Motorized use of the Bonaparte Trail #306 has been occurring for several decades.

## **AVAILABILITY**

### **Recreation**

The area around Mount Bonaparte is popular for hiking, hunting, mountain biking, and horseback riding. Some cross-country skiing occurs each winter as well. Bonaparte Trail #306 is maintained for motorized trail bike use, and the fire lookout is a popular destination, however since 2007 the trail has been closed to motorized use due to erosion and rutting. At least one outfitter-guide uses the trails and Roggow cabin during hunting season annually.



The primary recreation feature in the area is the Mount Bonaparte fire lookout. The area does not lend itself to the establishment of more developed sites. A system of trails is maintained in the area and provides a variety of hiking opportunities from the nearby Lost Lake and Bonaparte Lake developed recreation sites and nearby roads. The trail system provides access to the top of Mount Bonaparte. Recreation use is moderate and consists mostly of horseback riding, hunting and day hiking.

**Table 2--Miles of recreation trails**

Motorized Trails	Non-motorized Trails	Snowmobile Trails
3	15	0

## Wildlife

Sightings of the great gray owl (R6 Regional Forester's sensitive list) have been reported in or near the area (Washington state, 1985). Though the lodgepole pine-dominated area is relatively small, the Bonaparte Lynx Analysis Unit has been located in this PWA to help maintain potential habitat for Canada lynx (federally listed as threatened). About 1,600 acres are in winter range where mule deer tend to concentrate. Approximately 730 acres of mixed-conifer old growth have been field verified, providing some of the most productive habitat types for wildlife. Except for inclusions of unmanaged mixed-conifer, snag numbers for cavity dwellers are low throughout the lodgepole pine stands. Three ridges are identified as winter habitat for blue grouse. Other wildlife species common to the national forest also inhabit the area. Although this area does not provide expansive security habitat for wide-ranging carnivores such as grizzly bears, gray wolves, or wolverines, it does provide connectivity between better suited habitats. This PWA lies approximately 20 miles to the east of the North Cascades Grizzly Bear Recovery Zone and approximately 80 miles to the west of the Selkirk Grizzly Bear Recovery Zone.

The PWAs provide varying levels of habitat for focal wildlife species. To help evaluate the habitat these areas provide, the following information was provided: the focal species emphasized in the area, the amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the Forest that is within this particular PWA.

**Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species, and R6 focal species**

Wildlife Species	Acres of Habitat	Habitat Priority Ranking (1=high, 2=mod., 3=low)	%Total Forest Habitat in Evaluation Area
American marten	677	3	<1
Canada lynx	3,503	2	<1
Wolverine	8,918	3	<1

## Water/Fish

Several small streams drain the area: Myers Creek, Bonaparte Creek, Siwash Creek, and Antoine Creek. Water is used for domestic purposes, stock, and irrigation. Native and eastern brook trout have been found in Myers Creek, Antoine Creek, and Mill Creek.



Water quality is sufficient for all uses. Myers Creek eventually drains into the Kettle River in Canada. An international agreement between the United States and Canada exists that establishes a minimum water flow into Canada. While the runoff volume into Myers Creek is not large, it does contribute some of the flow. The other streams drain into adjudicated streams. Water flow from the area is often intermittent, but some contribution to flows does occur from spring snowmelt and ground water flows during the summer and fall.

There are no power withdrawals or known Federal Energy Regulatory Commission projects licensed or under application.

## Range

Approximately 70 percent of this area is unsuitable for grazing livestock. Some of the lower elevations are suitable, and cattle graze to natural barriers of dense timber or rock. Portions of the Phoebe, Strawberry and Siwash cattle and horse allotments fall within the area. These allotments are managed under rest rotation or deferred-rotation grazing systems. Approximately 764 animal unit months (AUMs) of grazing occur annually from June through September.

**Table 4--Percentage of grazing suitability areas and current allotments**

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
29%	100%	47%	0%

## Vegetation and Ecology

The entire area is tree-covered except for the extreme top of Mount Bonaparte and a few portions of the eastern edge of the ridge. Principal tree species are lodgepole pine, Douglas-fir, western larch and Engelmann spruce. Lodgepole pine covers that portion south of the peak and the northern portion down to approximately 5,000 feet. Some ponderosa pine is present. Upper elevations support subalpine fir and whitebark pine. A small portion of the mountain top and ridge has a subalpine plant community.

The Healthy Forest Restoration Act (HFRA) authorizes direction to implement fuel reduction projects within the wildland urban interface (WUI). The HFRA prohibits authorized projects in wilderness areas. Options to utilize mechanical treatments to manage vegetation would be precluded. Generally, the priority for restoration treatments occurs within the WUI or within the dry and mesic forest groups. Because WUI represents nearly 90 percent of the potential wilderness area, the prohibition on restorative treatments is a concern. The concern is decreased, however, by recognizing that dry and mesic forest is absent.

## *Timber Harvest Suitability*

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:



- Is it forest land (10 percent crown cover minimum, productivity >20 ft<sup>3</sup>/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (< 0.5 miles from existing transportation system, species value or condition, volume availability, logging systems)

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

**Table 5--Stand data percentages**

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	4%	Total WUI	89%
	Cold Dry	53%	WUI in Dry and Mesic Forest	0%
	Cold Moist	26%		
	Mesic	0%		
	Dry	0%		
	Non-forest	0%		

### ***Fire***

There have been at least 19 fires within the potential wilderness area (16 lightning-caused and 3 human-caused fires) since 1940. The species and location of the conifer vegetation found within the area is principally due to changes in elevation and historical fire occurrences. The presence of lodgepole pine is indicative of the influence of past fire activity. Recurrent fires would favor the more fire tolerant Douglas-fir and western larch by killing the invading lodgepole pine and creating a favorable seedbed for Douglas-fir and larch. Accumulations of dead lodgepole pine have increased fire hazard at the lower elevations. The relative flammability and risk of a large fire is much lower near the summit of Bonaparte Mountain, due to the absence of fine fuels that act as ignition sources and carrier of wildfires within the typical lodgepole pine stands.

Due to the proximity of Washington state and privately owned lands and high-use recreation sites, there are wildland urban interface-mapped lands all around the Mount Bonaparte PWA.



### ***Insects and Disease***

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency “to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role”. Policy also directs the agency to “protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species”, and finally, “to control insect and plant disease epidemics that threaten adjacent lands or resources.”

Information on insect activity is derived primarily from aerial survey data collected between 2003 and 2007. An outbreak of mountain pine beetles occurred in the 1980s. At that time, a large amount of dead, infested, and at-risk lodgepole pine was removed by the Myers LP and Myers Beetle Timber Sales. Mountain pine beetle activity has been relatively light through the 1990s and 2000s.

About 300 acres of damage due to balsam woolly adelgid has been mapped on Bonaparte Mountain. Balsam woolly adelgid is a European insect that was introduced to North America in the early 1900s. Any true fir can be a host, but subalpine fir is the most susceptible species on the District. Feeding by this sucking insect causes branch gouting and flagging, growth loss, wood degradation, and eventual tree death. Twenty-three species of predators were introduced between 1957 and 1964 in order to control this insect. Five of these species are established but do not appear to be reducing the balsam woolly adelgid population in any significant way. There is considerable difference in individual tree susceptibility. Silvicultural control is to discriminate against severely damaged trees, and to manage for non-host species.

Four percent of this PWA is comprised of a parkland forest group and is known to support stands of whitebark pine. Due to a combination of anthropogenic causes (introduced white pine blister rust, global warming, and fire suppression leading to high severity wildfires) coupled with predation from native mountain pine beetles, whitebark pine stands are at risk across their range. These whitebark pine stands are of inherent value as a plant community, for providing important habitat for wildlife including the federally listed grizzly bear, and for their aesthetics in contributing to the social setting. Wilderness designation would limit restoration options for these stands. Manipulations would only be considered in order to protect the composite wilderness resource, and only as a last resort to preserve naturalness at the expense of trammeling. Vegetation cover manipulation and reforestation in wilderness require approval of the Chief of the Forest Service. The Regional Forester can approve pesticide use.

### ***Threatened, Endangered, and Sensitive Plants***

The northern bog orchid (*Platanthera obtusata*) and yellow bog sedge (*Carex dioica*), state heritage and Forest Service listed sensitive species has been found in the area.

### ***Noxious Weeds***

Houndstongue is established on one hundred twenty-three acres within the PWA. Populations of orange and yellow hawkweed exist below the area (below 5,600 feet elevation) and along the trails leading into the PWA.



## **Minerals and Soils**

Soils are derived primarily from glacial till. Areas of coarse textured soils may be intermixed with areas of fine-textured lacustrine soils. These soils generally have high infiltration rates. Coarse textured soils have low to moderate erosion hazards and are considered generally stable for management activities. Fine-textured soils have a high mass erosion hazard when undercut.

The Mount Bonaparte PWA is underlain by intrusive igneous rocks of the Mount Bonaparte pluton. The area has seen very little prospecting and exploration as indicated by historic mining claim records and there are no historic mines or prospects of significance within the area. The entire area has a low or unknown potential for the occurrence of locatable minerals and at present (6/2008), there are no active claims within the Mount Bonaparte PWA.

The area has not been the subject of expressions of interest, lease applications, or leases for coal, oil and gas, or geothermal resources. The area has no potential for the occurrence of coal and oil and gas resources and a low or unknown potential for geothermal resources.

## **Cultural and Heritage Resources**

The *Cultural Resource Overview of the Tonasket Planning Unit* (Uebelacker, 1978) identified evidence of several old cabins in the area (e.g. Roggow Cabin). The primary fire lookout for the Tonasket Ranger District is located on Mount Bonaparte. This lookout and its older ground house are on the National Register of Historic Places.

## **Land Uses and Special Uses**

At least one outfitter-guide uses the trails and Roggow cabin during hunting season annually. The entire area is under term grazing permit for livestock during the months of June through September.

## **Private Lands**

There is no private land within the potential wilderness area and no known outstanding subsurface rights.

## **NEED FOR WILDERNESS**

### **Location and size of other wildernesses in the general vicinity and distance from the area to local population centers:**

The area is about 35 air miles east of the 529, 477-acre Pasayten Wilderness, 65 air miles northeast of the 151,435-acre Lake Chelan-Sawtooth Wilderness, and 80 air miles northeast of the 570,573-acre Glacier Peak Wilderness. The Mount Bonaparte PWA is about six hours driving time from the Spokane and Puget Sound area.

A separate analysis identified where the PWAs could contribute to the wilderness recreation setting either by preserving the primitive recreation setting adjacent to existing wilderness, or by contributing assessable and attractive day use destinations (which are



under heavy pressure in existing wilderness). The analysis also examined which PWAs would contribute either a unique landform to the wilderness system, or where trails access vegetation types that are underrepresented in wilderness at a regional scale.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as moderate. Mt. Bonaparte is one of the tallest peaks in the Okanogan Highlands landform, which is underrepresented in wilderness. The peak also attracts use to the fire lookout and the historic Roggow cabin. A few trails are likely to be popular for dayhikes. There are PWAs on the Colville National Forest that are stronger candidates for supporting wilderness recreation in the Okanogan Highlands Ecoregion.

### **Present visitor pressure on other wildernesses, trends, and changing patterns of use:**

Overall, there is a continuous, slight increase in the number of people visiting wilderness areas. The user groups showing the most increase are day-hikers in the Pasayten and Lake Chelan-Sawtooth Wildernesses and day horse users in the Lake Chelan-Sawtooth Wilderness. There also appears to be a slight increase in off trail travel to specific destinations within these wilderness areas. There is also a trend to shorter multiple-day trips.

### **Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences:**

The Colville and Okanogan-Wenatchee National Forests provide large backcountry areas (that are not designated wilderness) within 100 miles of the Mount Bonaparte PWA that provide opportunities for unconfined outdoor recreation. These areas include the PWAs of the Kettle Mountain Range, the Long Swamp and Tiffany PWAs, and the Abercrombie-Hooknose PWA. These areas afford both motorized and non-motorized opportunities.

### **The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena:**

#### ***Wildlife***

The Mount Bonaparte PWA provides important habitat for a number of wildlife species that are either unique or require large blocks of continuous habitat. Species include gray wolf, American marten, wolverine, lynx, and great gray owl. In addition, Mount Bonaparte is part of a larger expanse of continuous lynx habitat that has the highest reported concentration of lynx in the lower 48 states. However, for American marten (*Martes americana*), grizzly bear (*Ursus arctos*), wolverine (*Gulo gulo*), and Canada lynx (*Lynx canadensis*) the wildlife sustainability index is 14.9 (a low relative ranking) and the habitat connectivity index is 8.9 (also low relative ranking).



***Fish***

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad-scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a low ranking based on these factors.

***Threatened, Endangered, and Sensitive Plant Species***

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as low for this PWA. The second factor, which also ranked as low for this PWA, examined the degree of rarity of any SOI/SOC species present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington state as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as high priority for preserving rare plant refugia with a wilderness designation.

**Ability to provide for the preservation of identifiable landform types and ecosystems:**

The area is typical of landforms and ecosystems found at higher elevations throughout the Okanogan Highlands and "meadows" portion of the Tonasket Ranger District. Using Bailey's Ecoregion classification system, the Mount Bonaparte PWA is part of the Okanogan Highlands Ecoregion which is under-represented in the wilderness system.



An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 8 percent of the vegetative cover of this PWA (258 acres). These types include forb lands, non-alpine meadows, alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as low for the portion of this area with underrepresented cover types, and also as low for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types represented in this PWA include sparse amounts of cottonwood and abundant aspen.

In particular, the aspen cover type would make a significant contribution within the eastern Washington planning area.